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Occupational Employment and Wages in Erie – May 2014

Workers in the Erie Metropolitan Statistical Area had an average (mean) hourly wage of \$18.28 in May 2014, 20 percent below the nationwide average of \$22.71, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, wages in the local area were significantly lower than their respective national averages in 17 of the 22 major occupational groups, including computer and mathematical; legal; management; and arts, design, entertainment, sports, and media. (See [table A](#) and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Erie Metropolitan Statistical Area, and measures of statistical significance, May 2014

Major occupational group	Employment share (percent of total)			Average (mean) hourly wage			
	United States	Erie	Significant difference ⁽¹⁾	United States	Erie	Significant difference ⁽¹⁾	Percent difference ⁽²⁾
Total, all occupations.....	100.0%	100.0%		\$22.71	\$18.28	Yes	-20
Management.....	5.0	3.1	Yes	54.08	44.78	Yes	-17
Business and financial operations.....	5.1	3.4	Yes	34.81	27.81	Yes	-20
Computer and mathematical.....	2.8	1.0	Yes	40.37	28.69	Yes	-29
Architecture and engineering.....	1.8	1.3	Yes	39.19	32.68	Yes	-17
Life, physical, and social science.....	0.8	0.3	Yes	33.69	35.39	No	5
Community and social service.....	1.4	1.9	Yes	21.79	18.86	Yes	-13
Legal.....	0.8	0.3	Yes	48.61	38.94	Yes	-20
Education, training, and library.....	6.2	6.5	No	25.10	23.91	No	-5
Arts, design, entertainment, sports, and media.....	1.3	0.8	Yes	26.82	18.09	Yes	-33
Healthcare practitioners and technical.....	5.8	6.7	Yes	36.54	31.80	Yes	-13
Healthcare support.....	2.9	4.5	Yes	13.86	11.83	Yes	-15
Protective service.....	2.4	2.3	No	21.14	21.00	No	-1
Food preparation and serving related.....	9.1	10.0	Yes	10.57	9.46	Yes	-11
Building and grounds cleaning and maintenance.....	3.2	3.4	No	12.68	10.66	Yes	-16
Personal care and service.....	3.1	4.3	Yes	12.01	10.94	Yes	-9
Sales and related.....	10.5	10.7	No	18.59	15.22	Yes	-18
Office and administrative support.....	16.0	15.2	No	17.08	14.91	Yes	-13
Farming, fishing, and forestry.....	0.3	0.0	Yes	12.09	16.76	Yes	39
Construction and extraction.....	3.9	2.9	Yes	22.40	20.43	Yes	-9
Installation, maintenance, and repair.....	3.9	3.7	No	21.74	18.09	Yes	-17
Production.....	6.6	13.4	Yes	17.06	16.73	No	-2
Transportation and material moving.....	6.8	4.5	Yes	16.57	14.95	Yes	-10

(1) Statistical significance testing at the 90-percent confidence level.

(2) A positive percent difference measures how much the mean wage in Erie is above the national mean wage, while a negative difference reflects a lower wage.

When compared to the nationwide distribution, Erie employment shares were significantly higher in 6 of the 22 occupational groups including production and healthcare support. Conversely, 10 groups had employment shares significantly below their national representation; these groups included transportation and material moving, management, and computer and mathematical.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Erie had 16,780 jobs in production, accounting for 13.4 percent of local area employment, significantly above the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$16.73, which was comparable to the national average of \$17.06.

With employment of 1,270, first-line supervisors of production and operating workers was the largest occupation within the production group, followed by machinists (930). Among the higher-paying jobs were first line supervisors of production and operating workers (\$25.25) and tool and die makers (\$22.23). At the lower end of the wage scale were laundry and dry-cleaning workers and bakers, with mean hourly wages of \$10.35 and \$11.73, respectively. (Detailed occupational data for the business and financial operations group are presented in [table 1](#); for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_21500.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Erie area, above-average concentrations of employment were found in several of the occupations within the production group. For instance, metal and plastic molding, coremaking, and casting machine setters, operators, and tenders were employed at almost six times the national rate. On the other hand, butchers and meat cutters had a location quotient of 1.1 in Erie, meaning that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry.

Note

OES wage and employment data for the 22 major occupational groups in the Erie Metropolitan Statistical Area were compared to their respective national averages based on statistical significance testing. Only those occupations with wages or employment shares above or below the national wage or share after testing for significance at the 90-percent confidence level meet the criteria.

NOTE: A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. OES estimates are constructed from a sample of about 1.2 million establishments. Each year, forms are mailed to two semiannual panels of approximately 200,000 sampled establishments, one panel in May and the other in November. May 2014 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2014, November 2013, May 2013, November 2012, May 2012, and November 2011. The overall national response rate for the six panels is 74.3 percent based on establishments and 70.5 percent based on employment. The sample in the Erie Metropolitan Statistical Area included 1,652 establishments with a response rate of 76 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from www.bls.gov/oes/current/oesrcst.htm and www.bls.gov/oes/current/oesrcma.htm, respectively.

The May 2014 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Erie, Pa. Metropolitan Statistical Area** includes Erie County in Pennsylvania.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/mid-atlantic. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf. Information in this release will be made available to sensory impaired individuals upon request – Voice phone: 202-691-5200; Federal Relay Service: 1-800-877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2014

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production occupations.....	16,780	2.0	\$16.73	\$34,800
First-line supervisors of production and operating workers.....	1,270	2.3	25.25	52,520
Electrical and electronic equipment assemblers.....	520	2.7	12.50	26,010
Engine and other machine assemblers.....	30	0.9	16.45	34,210
Structural metal fabricators and fitters.....	70	1.0	17.49	36,370
Team assemblers.....	740	0.7	14.22	29,580
Assemblers and fabricators, all other.....	140	0.6	13.75	28,600
Bakers.....	260	1.6	11.73	24,400
Butchers and meat cutters.....	140	1.1	16.20	33,690
Food batchmakers.....	220	1.9	14.34	29,830
Food cooking machine operators and tenders.....	(5)	(5)	12.81	26,640
Computer-controlled machine tool operators, metal and plastic.....	350	2.5	16.99	35,340
Computer numerically controlled machine tool programmers, metal and plastic.....	70	3.1	18.33	38,120
Extruding and drawing machine setters, operators, and tenders, metal and plastic.....	180	2.6	13.87	28,840
Forging machine setters, operators, and tenders, metal and plastic.....	90	4.6	23.04	47,920
Rolling machine setters, operators, and tenders, metal and plastic.....	40	1.4	15.04	31,280
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic.....	810	4.6	13.58	28,240
Drilling and boring machine tool setters, operators, and tenders, metal and plastic.....	70	4.0	17.62	36,650
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic.....	210	3.2	14.39	29,920
Lathe and turning machine tool setters, operators, and tenders, metal and plastic.....	180	4.4	17.33	36,040
Machinists.....	930	2.5	19.86	41,300
Metal-refining furnace operators and tenders.....	50	2.5	17.22	35,810
Foundry mold and coremaking.....	(5)	(5)	15.16	31,530
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic.....	700	5.9	15.93	33,140
Multiple machine tool setters, operators, and tenders, metal and plastic.....	330	3.6	14.19	29,520
Tool and die makers.....	290	4.0	22.23	46,230
Welders, cutters, solderers, and brazers.....	530	1.5	16.42	34,140
Welding, soldering, and brazing machine setters, operators, and tenders.....	(5)	(5)	15.59	32,430
Heat treating equipment setters, operators, and tenders, metal and plastic.....	70	3.7	20.92	43,510
Plating and coating machine setters, operators, and tenders, metal and plastic.....	150	4.6	17.74	36,900
Prepress technicians and workers.....	40	1.2	18.33	38,130
Printing press operators.....	(5)	(5)	17.78	36,990
Print binding and finishing workers.....	(5)	(5)	15.07	31,340
Laundry and dry-cleaning workers.....	220	1.2	10.35	21,540
Sewing machine operators.....	40	0.3	11.24	23,370
Sawing machine setters, operators, and tenders, wood.....	(5)	(5)	12.95	26,930
Woodworking machine setters, operators, and tenders, except sawing.....	60	0.9	13.88	28,870
Water and wastewater treatment plant and system operators.....	110	1.1	22.26	46,300
Chemical plant and system operators.....	70	2.0	23.88	49,670
Gas plant operators.....	(5)	(5)	22.57	46,950
Chemical equipment operators and tenders.....	60	1.1	17.09	35,550
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	40	1.0	17.18	35,740
Grinding and polishing workers, hand.....	40	1.6	12.30	25,590

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2014 - Continued

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Mixing and blending machine setters, operators, and tenders.....	180	1.6	16.59	34,510
Extruding, forming, pressing, and compacting machine setters, operators, and tenders.....	(5)	(5)	12.91	26,850
Inspectors, testers, sorters, samplers, and weighers.....	820	1.8	16.61	34,550
Packaging and filling machine operators and tenders.....	260	0.7	14.48	30,120
Coating, painting, and spraying machine setters, operators, and tenders..	230	2.8	14.91	31,010
Painters, transportation equipment.....	(5)	(5)	26.42	54,950
Cleaning, washing, and metal pickling equipment operators and tenders..	50	3.1	14.34	29,830
Molders, shapers, and casters, except metal and plastic.....	50	1.6	13.49	28,050
Helpers--production workers.....	690	1.8	12.18	25,330
Production workers, all other.....	130	0.6	13.22	27,490

(1) For a complete listing of all detailed occupations in the Erie MSA, see www.bls.gov/oes/current/oes_21500.htm.

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not releases.